

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Original): A wavelength division multiplexing and optical transmission apparatus comprising:

a plurality of optical transmitting units for modulating a plurality of laser signals having inherent wavelengths with a plurality of data signals and outputting a plurality of modulated optical signals;

optical amplifying means for outputting an amplified spontaneous emission light signal;

band pass filtering means for setting both an occupied wavelength band of the modulated optical signals output by the optical transmitting units and a neighboring wavelength band of the occupied wavelength band as a filtering wavelength band and band-filtering the amplified spontaneous emission light signal output by the optical amplifying means and outputting a non-modulated spectrum slice optical signal; and

optical multiplexing means for multiplexing the non-modulated spectrum slice optical signal output by the band pass filtering means with the modulated optical signals output by the optical transmitting units and transmitting a multiplexed optical signal.

Claim 2 (Original): A wavelength division multiplexing and optical transmission apparatus according to claim 1, wherein the optical amplifying means comprises a pair of optical amplifiers which each have a signal input terminal terminated at no-reflection, and the band pass filtering means comprises optical band pass filters for setting both the occupied wavelength band of the modulated optical signals output by the optical transmitting units and the neighboring wavelength band of the occupied wavelength band as the filtering

wavelength band, filtering amplified spontaneous emission light signals output by the optical amplifiers and outputting non-modulated spectrum slice optical signals.

Claim 3 (Original): A wavelength division multiplexing and optical transmission apparatus according to claim 1, wherein the optical amplifying means comprises a single optical amplifier which has a signal input terminal terminated at no reflection, and the band pass filtering means comprises

a light dividing element for dividing the amplified spontaneous emission light signal output by the optical amplifier into a plurality of amplified spontaneous emission light signals, and

a plurality of optical band pass filters, connected to a plurality of divided output terminals of the light dividing element respectively, for outputting the non-modulated spectrum slice optical signal.

Claim 4 (Original): A wavelength division multiplexing and optical transmission apparatus according to claim 1, wherein the optical amplifying means comprises a single optical amplifier which has a signal input terminal terminated at no reflection, and the band pass filtering means comprises

a light dividing element for dividing the amplified spontaneous emission light signal output by the optical amplifier into a plurality of amplified spontaneous emission light signals,

a plurality of optical band pass filters connected to a plurality of divided output terminals of the light dividing element respectively,

an optical multiplexer for multiplexing two or more outputs of the optical band pass filters with each other and outputting the non-modulated spectrum slice optical signal, and

an optical amplifier for amplifying an output of the optical multiplexer while controlling a power of the output to a constant value.

Claim 5 (Original): A wavelength division multiplexing and optical transmission apparatus according to claim 1, wherein the optical amplifying means comprises an optical amplifier which has a signal input terminal terminated at no reflection, and a plurality of pumping laser signal sources connected to the optical amplifier redundantly.

Claim 6 (Original): A wavelength division multiplexing and optical transmission apparatus according to claim 1, wherein the band pass filtering means comprises a plurality of optical band pass filters connected in cascade.

Claim 7 (New): A method for transmitting a wavelength division multiplexed optical transmission, comprising:

modulating a plurality of laser signals having inherent wavelengths with a plurality of data signals and outputting a plurality of modulated optical signals;

amplifying a spontaneous emission light signal and outputting an amplified spontaneous emission light signal;

setting an occupied wavelength band of the modulated optical signals;

setting a neighboring wavelength band of the occupied wavelength band as a filtering wavelength band;

band filtering the amplified spontaneous emission light signal;

outputting a non-modulated spectrum slice optical signal;

multiplexing the non-modulated spectrum slice optical signal output with the modulated optical signals; and
transmitting a multiplexed optical signal.

Claim 8 (New): The method of claim 7, wherein said step of amplifying comprises:
amplifying with a pair of optical amplifiers each having a signal input terminal terminated at no-reflection.

Claim 9 (New): The method of claim 7, wherein said step of amplifying comprises:
amplifying with a single optical amplifier which has a signal input terminal terminated at no reflection, said method further comprising
dividing the amplified spontaneous emission light signal output by the optical amplifier into a plurality of amplified spontaneous emission light signals.

Claim 10 (New): The method of claim 7, wherein said step of amplifying comprises:
amplifying with a single optical amplifier which has a signal input terminal terminated at no reflection, said method further comprising
dividing the amplified spontaneous emission light signal output by the optical amplifier into a plurality of amplified spontaneous emission light signals,
multiplexing two or more outputs with each other and outputting the non-modulated spectrum slice optical signal, and
amplifying an output while controlling a power of the output to a constant value.

Claim 11 (New): The method of claim 7, further comprising:

pumping a plurality of laser signal sources connected to an optical amplifier
- redundantly.

Claim 12 (New): The method of claim 7, wherein said step of band pass filtering
comprises:

band pass filtering with a plurality of optical band pass filters connected in cascade.